What is a Drought Early Warning System?

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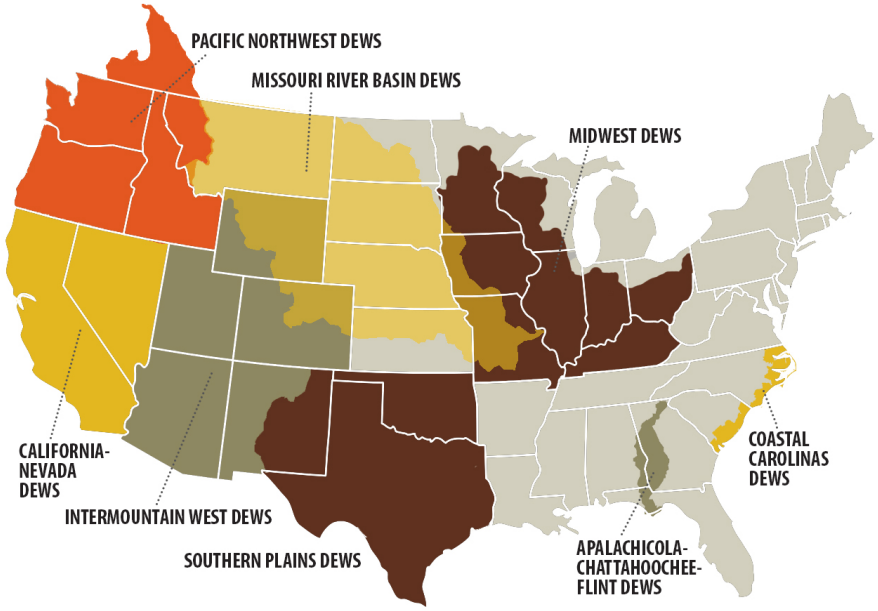
Fresno, CA

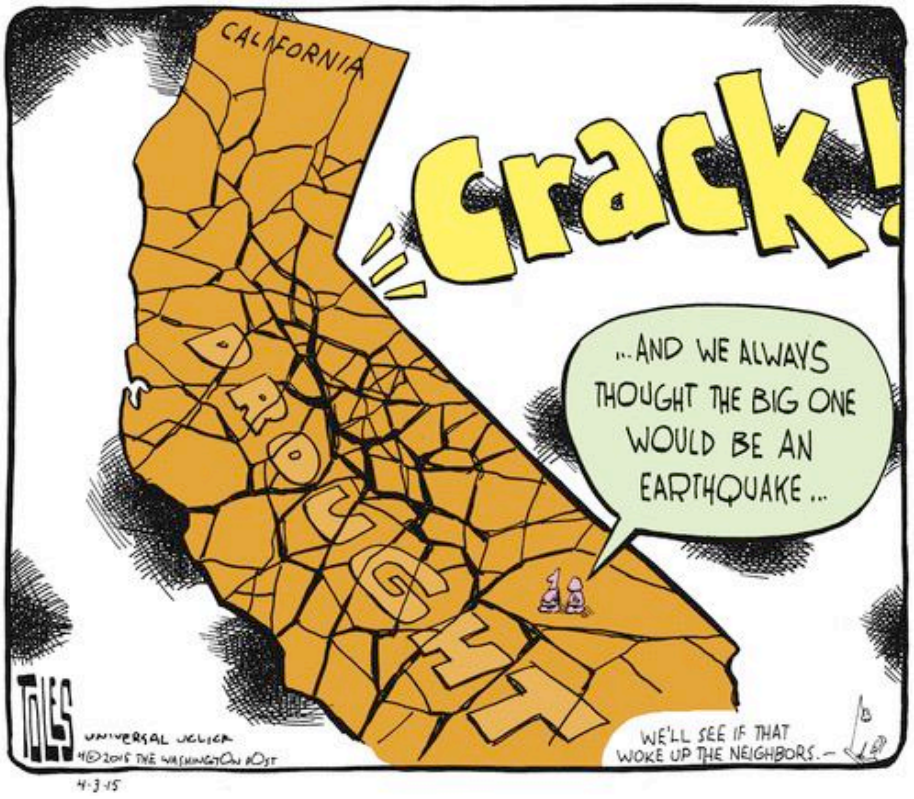
What is the National Integrated Drought Information System (NIDIS)?

- A NOAA program with an interagency mandate.
- Provide a better understanding of how and why droughts affect society, the economy and the environment.
- Improve accessibility, dissemination and use of early warning information for drought risk management.
- Build off of a network of Regional Drought Early Warning Systems (DEWS) to create a National Drought Early Warning System.



What *really* is Drought Early Warning?

Provision of timely and effective information, through identified institutions, that allows individuals exposed to a hazard to take action to avoid or reduce their risk and prepare for effective response[1]

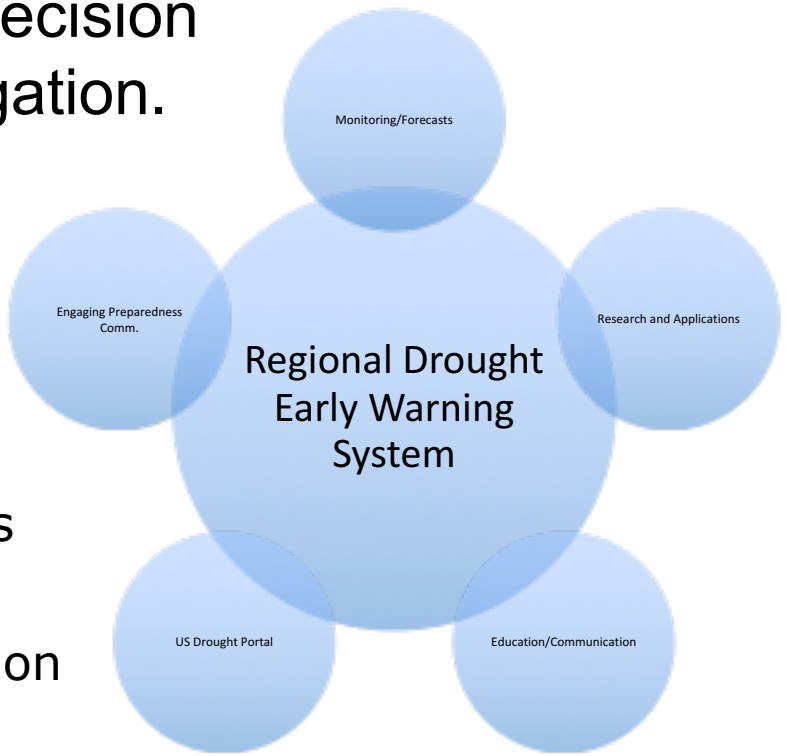


[1]International Strategy for Disaster Reduction

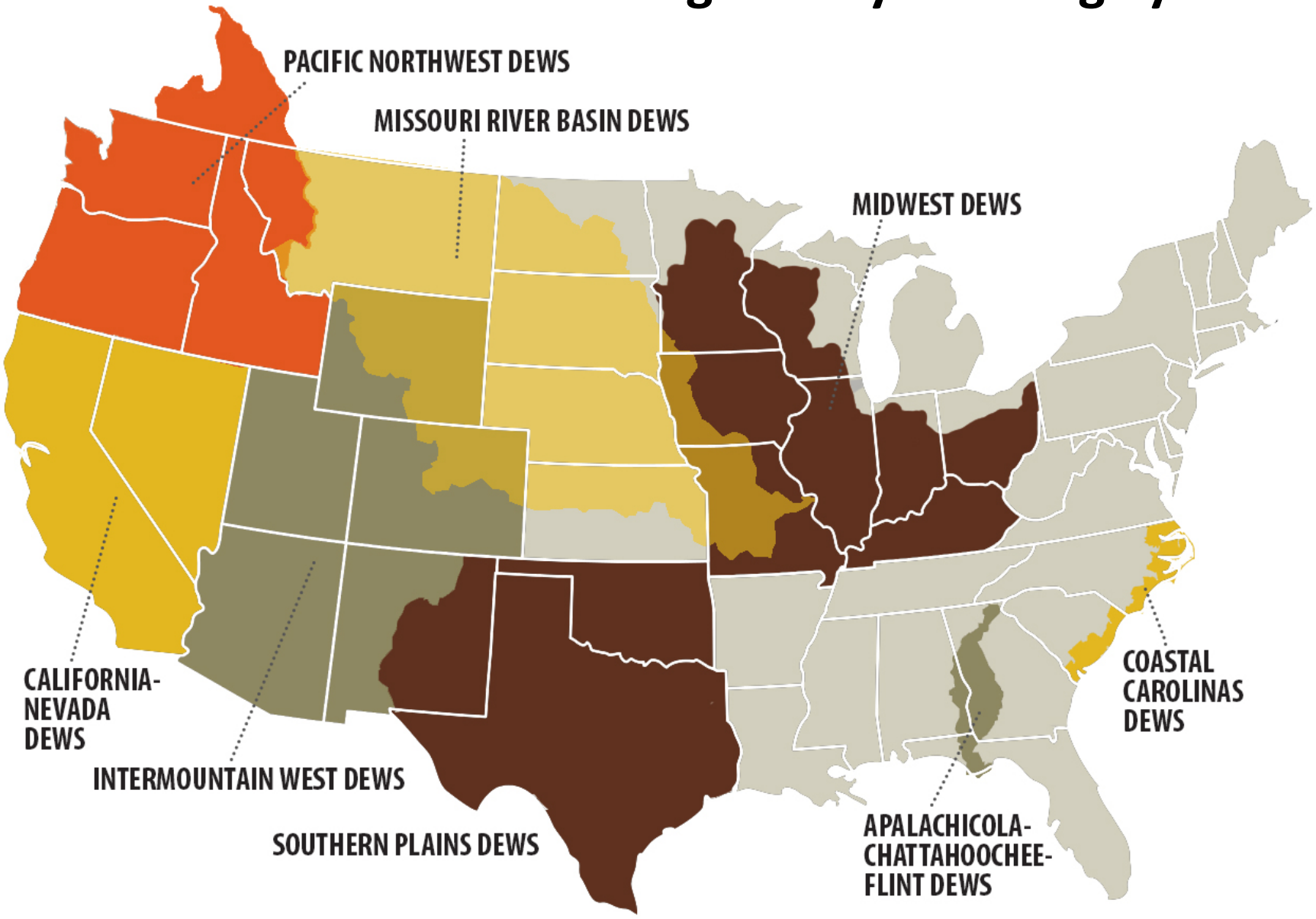
Regional Drought Early Warning Systems (DEWS)

Working with communities and existing networks to build capacity for better decision making for drought planning and mitigation.

- Drought & risk assessments
- Climate outlook forums
- Education and outreach webinars
- Engaging the preparedness community
- Builds capacity to utilize existing products
  - Provide test beds for new products
- Develop new/utilize existing communication networks



NIDIS Drought Early Warning Systems



Examples of other DEWS Activities

Upper Colorado River Basin/Intermountain West DEWS

- **Monitoring & Prediction**
  - Upper Colorado River Basin Drought Assessments
  - Colorado Water Availability Task Force
  - Western Water Assessment Intermountain West Dashboard
- **Innovative Research, Applications & Assessments**
  - Evaporative Demand Drought Index (EDDI)
  - Water Resources Monitor & Outlook (WRMO)
  - Testing the utility of highly-resolved spatial snow data
- **Engaging Preparedness & Adaptation Communities**
  - WWA Snowpack Monitoring Workshops (2015)
  - Colorado Drought Tournament (2012)

COLORADO CLIMATE CENTER

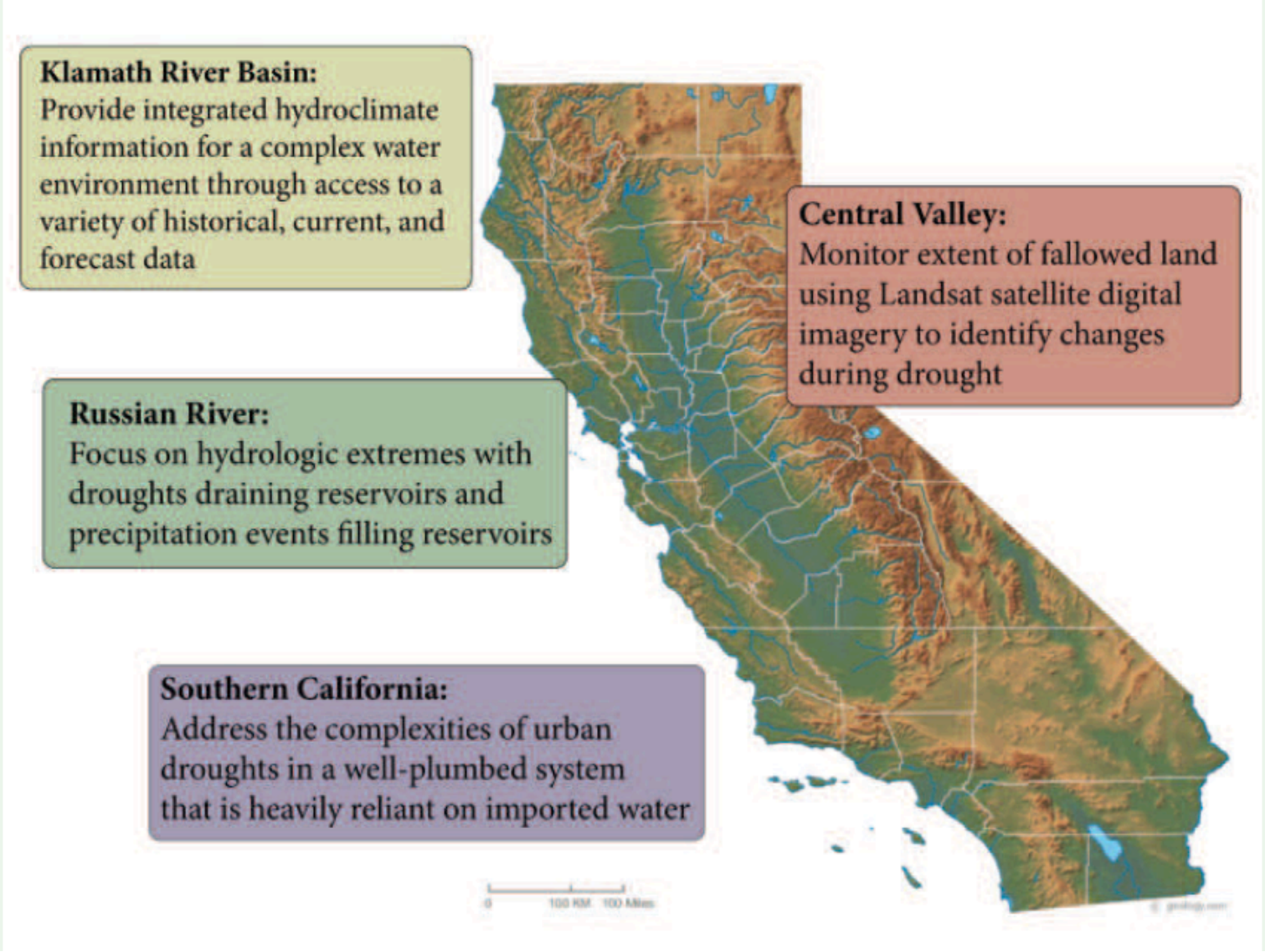
WESTERN WATER ASSESSMENT
A NOAA RISA TEAM

COLORADO
Colorado Water Conservation Board
Department of Natural Resources

NOAA

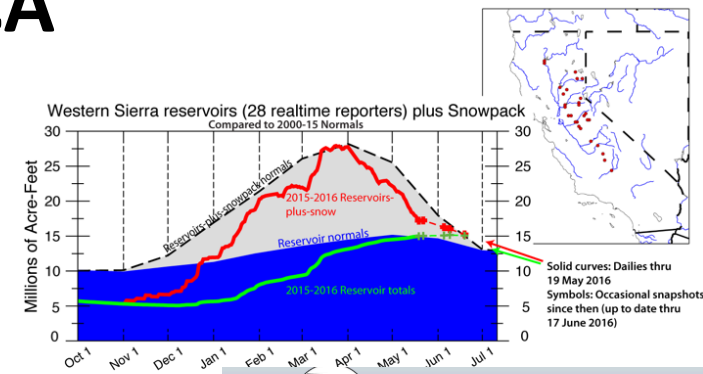
NIDIS

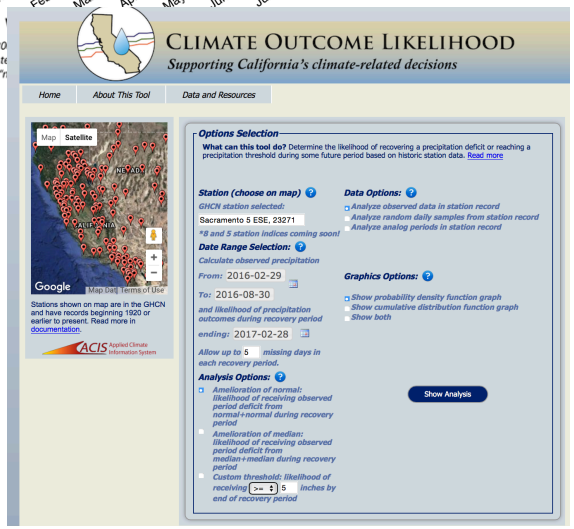
The original California DEWS

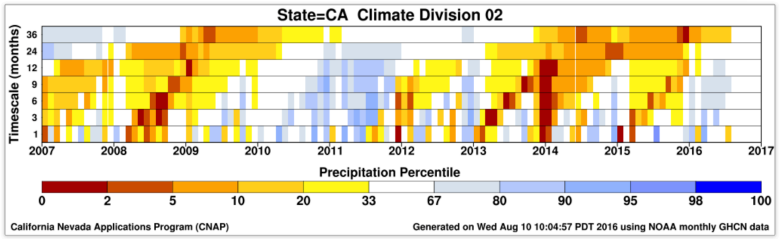


Continue Development of Drought Early Warning in CA

- Climate Outcome Likelihood Tool
  - http://wrcc.dri.edu/col/index/
- Evaluating and understanding seasonal forecast skill using the National Multi-Model Ensemble (NMME)
- Development of a historical catalogue of atmospheric rivers
- Investigation of the impacts of drought & climate impacts on wildfire
- Evaluation of water supplies in California, including water stored in state's snowpack, reservoirs, and to the extent possible, groundwater storage
- Evaluation of historical atmospheric circulation patterns related to major precipitation events and lack thereof to aid forecasts of drought and drought busting
- Drought scenario planning with local agency planners and water utilities using downscaled climate model projections focused on California
- Near real time ground water pumping in the Central Valley with USGS

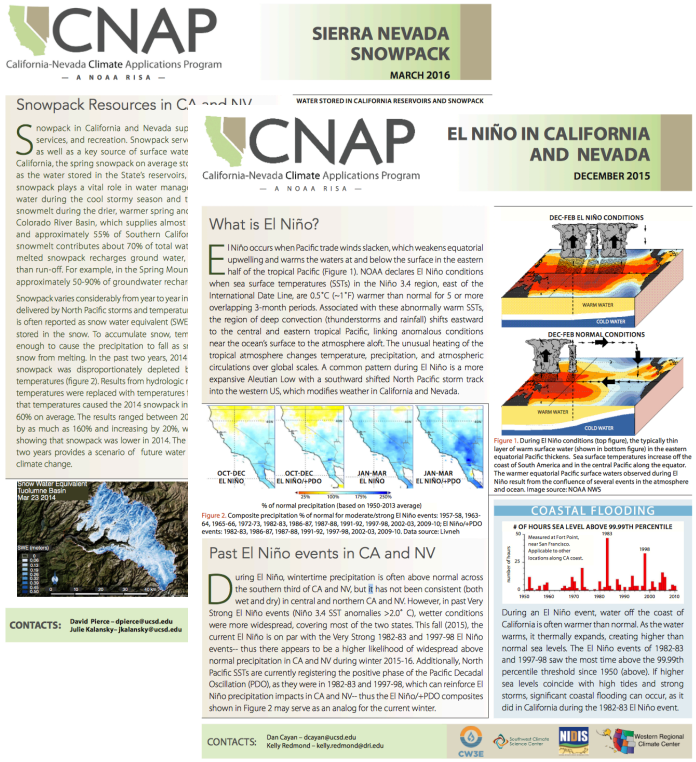






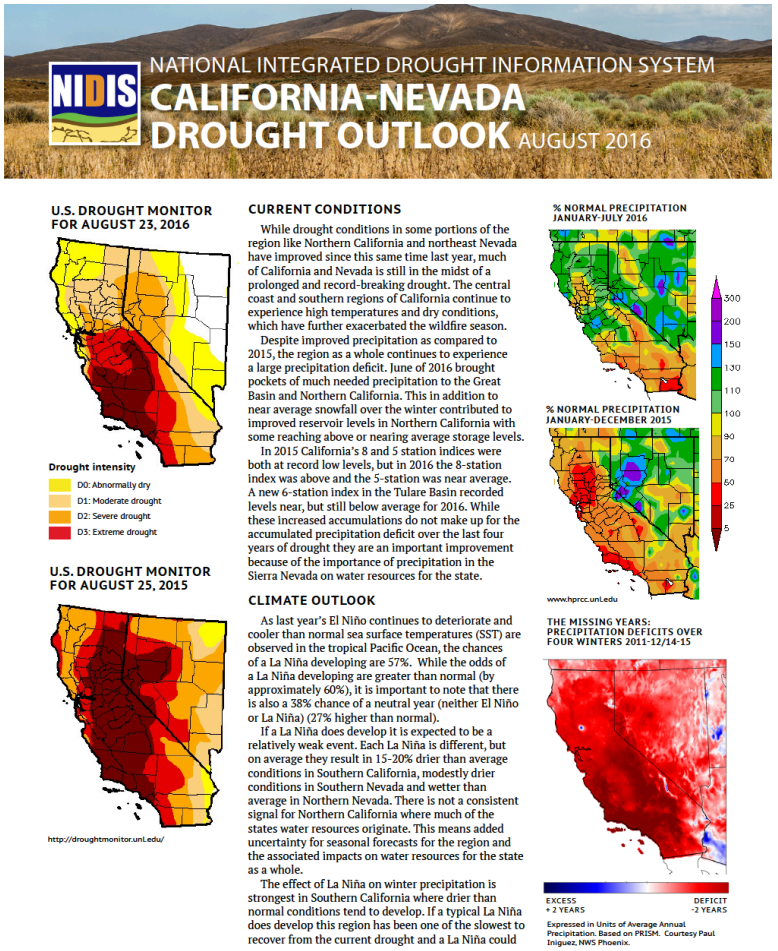
Recent California DEWS Early Warning Activities

- Stakeholder and decision maker engagement through meetings, webinars, interviews, invited presentations, and other outreach activities at the state and regional scale.
- Timely two page informational handouts
- Southern California NIDIS Community Meeting, July 2015
- Winter Status Update Meeting (San Diego) and Webinar, January 2016



2016-2017 Activities

- Drought and Climate Outlook Webinar Series (Aug., Nov., Jan., March)
  - **Next webinar Nov 28th at 11am PT**
- Several In-person Drought and Climate Outlooks and Information Gathering Meetings
  - Southern California – Sept 15th, Riverside
  - North Central Coast – Oct 11th, Seaside
  - **Central Valley – Oct 12th, Fresno**
  - *Winter Status Update – Jan/Feb 2017, San Diego*
  - *CA/NV DEWS Kickoff Meeting - March 2017, TBD*
- More information: https://drought.gov/drought/dews/california-nevada

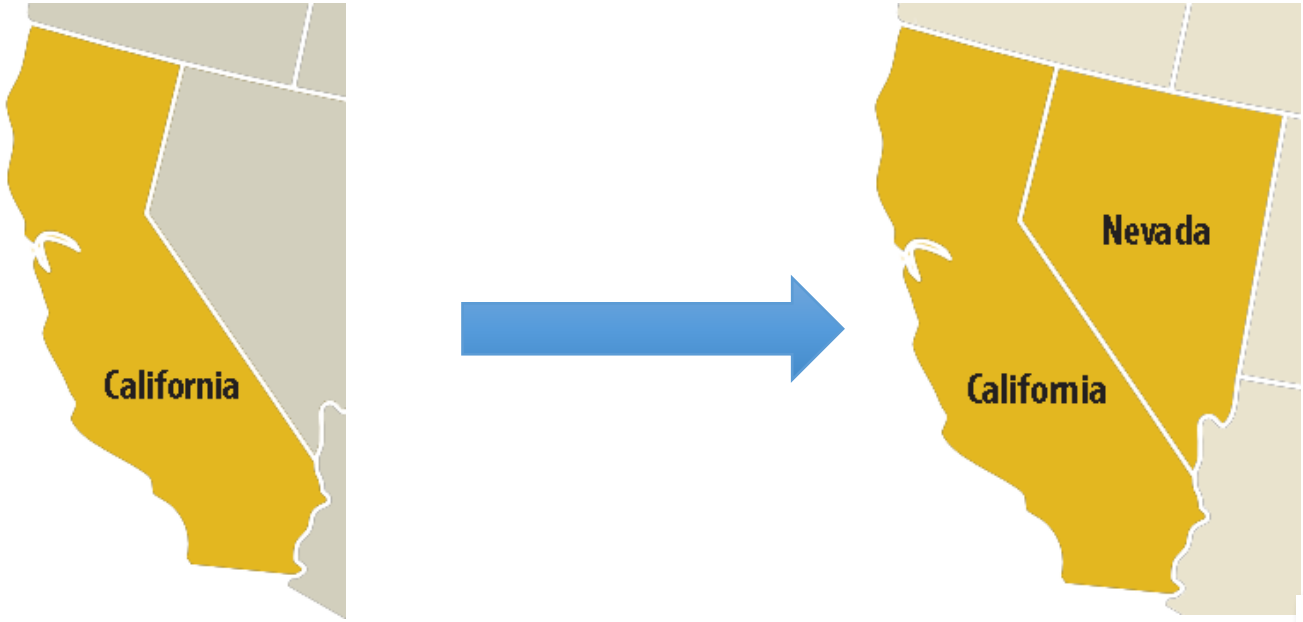


August 24th Webinar Summary

Again….what is a Drought Early Warning System?

A DEWS utilizes new and existing partner networks to optimize the expertise of a wide range of federal, tribal, state, local and academic partners in order to make climate and drought science and impact data readily available, easily understandable and usable for decision makers; and to improve the capacity of stakeholders and economic sectors to better monitor, forecast, plan for and cope with the impacts of drought at all spatial and time scales.

New opportunities with the newly expanded California-Nevada DEWS



First two years of a DEWS

Year 1

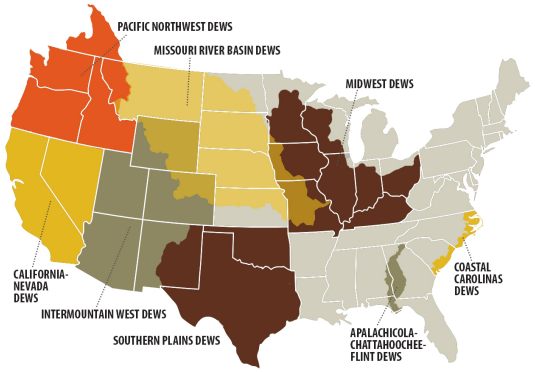
- Scoping the Drought Early Warning System
  - Gap analyses
    - What information exists?
    - How is it used?
  - Identify 2-3 critical issues
  - Characterize and communicate risks across timescales

Year 2

- Implementation of the DEWS
  - Consider seasonal, multi-year, longer term trends
  - Develop drought sub-portals
  - Embed information into preparedness & adaptation plans
  - Establish network for ongoing communication on impacts and projects

Benefits of a DEWS Strategic Plan

- Fostering a regional network
- Collaboration and coordination
- Reference to help generate policy and governmental support
- Resource to assist with leveraging funds
- Foster sharing of activities and info within and across other DEWS



Development of the CA-NV DEWS Strategic Plan

- Roadmap for moving forward with the CA-NV DEWS
- Identify existing and new drought- related activities throughout the region
- Living document w/ 2-yr time frame
- Focus is on activities in the region

Questions?

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